

CLAIMS

We claim:

1. A method of inhibiting ztnf4 activity in a mammal comprising administering to said mammal an amount of a compound selected from the group consisting of:

a) a polypeptide comprising the extracellular domain of BR43x2;

b) a polypeptide comprising the extracellular domain of TACI;

c) a polypeptide comprising the extracellular domain of BCMA;

d) a polypeptide comprising the sequence of SEQ ID NO:10;

e) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:2;

f) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:4;

g) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:6;

h) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:8;

i) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:10;

k) a polypeptide of SEQ ID NO:4;

l) amino acid residues 1-166 of SEQ ID NO:6; and

m) amino acid residues 1-150 of SEQ ID NO:8.

2. A method according to claim 1, wherein said compound is a fusion protein consisting of a first portion and a second portion joined by a peptide bond, said first portion comprising a polypeptide selected from the group consisting of:

a) a polypeptide comprising the sequence of SEQ ID NO:8;

b) a polypeptide comprising amino acid residues 25-58 of SEQ ID NO:2;

- a) a polypeptide of SEQ ID NO:4;
- b) amino acid residues 1-154 of SEQ ID NO:6; and
- c) amino acid residues 1-48 of SEQ ID NO:8.

7. A method according to claim 1, wherein said antibody or antibody fragment is selected from the group consisting of:

8. A method according to the claim 7, wherein said antibody fragment is selected from the group consisting of F(ab'), F(ab), Fab', Fab, Fv, scFv, and minimal recognition unit.

10. A method according to claim 1, wherein said ztnf4 activity is associated with B lymphocytes.

12. A method according to claim 1, wherein said ztnf4 activity is associated with resting B lymphocytes.

14. A method according to claim 13, wherein said antibody production is associated with an autoimmune disease.

16. A method according to claim 1, wherein said ztnf4 activity is associated with asthma, bronchitis or emphysema.

18. A method according to claim 1, wherein said *ztnf4* activity is associated with renal disease.

20. A method according to claim 1, wherein said λ is associated with renal neoplasms, multiple myelomas, lymphomas, light chain neuropathy or amyloidosis.

22. A method according to claim 21, wherein said *ztnf4* activity is associated with moderating immune response.

24. A method according to claim 21, wherein said immunosuppression is associated with graft rejection, graft verses host disease or inflammation.

25. A method according to claim 24, wherein said activity is associated with autoimmune disease.

26. A method according to claim 25, wherein said autoimmune disease is insulin dependent diabetes mellitus or Crohn's Disease.

27. A method according to claim 26, wherein said ztnf4 activity is associated with inflammation.

28. A method according to claim 27, wherein said inflammation is associated with joint pain, swelling, anemia, or septic shock.

29. A method for inhibiting BR43x2, TACI or BCMA receptor-ligand engagement comprising administering an amount of a compound selected from the group consisting of:

a) a polypeptide comprising the extracellular domain of BR43x2;

b) a polypeptide comprising the extracellular domain of TACI;

c) a polypeptide comprising the extracellular domain of BCMA;

d) a polypeptide comprising the sequence of SEQ ID NO:10;

e) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:2;

f) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:4;

g) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:6;

h) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:8;

i) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:10;

j) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:18;

Seq. ID NO: 1-18

k) an antibody or antibody fragment which specifically binds to a polypeptide of SEQ ID NO:20;

k) a polypeptide of SEQ ID NO:4;

l) amino acid residues 1-166 of SEQ ID NO:6; and

m) amino acid residues 1-150 of SEQ ID NO:8.

30. A method according to claim 29, wherein said compound is a fusion protein consisting of a first portion and a second portion joined by a peptide bond, said first portion comprising a polypeptide selected from the group consisting of:

a) a polypeptide comprising the sequence of SEQ ID NO:8;

b) a polypeptide comprising amino acid residues 25-58 of SEQ ID NO:2;

c) a polypeptide comprising amino acid residues 34-66 of SEQ ID NO:6;

d) a polypeptide comprising amino acid residues 71-104 of SEQ ID NO:6;

e) a polypeptide comprising amino acid residues 25-104 of SEQ ID NO:6;

f) a polypeptide comprising amino acid residues 8-37 of SEQ ID NO:8;

g) a polypeptide comprising amino acid residues 41-88 of SEQ ID NO:8;

h) a polypeptide comprising amino acid residues 8-88 of SEQ ID NO:8; and

said second portion comprising another polypeptide.

31. A method according to claim 30, wherein said first portion further comprises a polypeptide selected from the group consisting of:

a) amino acid residues 59-120 of SEQ ID NO:2;

b) amino acid residues 105-166 of SEQ ID NO:6; and

c) amino acid residues 89-150 of SEQ ID NO:8.

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c) a polypeptide comprising the extracellular domain of BCMA.

c) amino acid residues 1-48 of SEQ ID NO:8.

d) human monoclonal antibody.

37. A method according to claim 29, wherein said BR43x2, TACI or BCMA receptor-ligand engagement is associated with B lymphocytes.

38. A method according to claim 29, wherein said BR43x2, TACI or BCMA receptor-ligand engagement is associated with activated B lymphocytes.

40. A method according to claim 29, wherein said BR43x2, TACI or BCMA receptor-ligand engagement is associated with antibody production.

42. A method according the claim 41, wherein said autoimmune disease is systemic lupus erythromatosis, myasthenia gravis, multiple sclerosis, or rheumatoid arthritis.

44. A method according to claim 29, wherein said BR43x2, TACI or BCMA receptor-ligand engagement is associated with end stage renal failure.

46. A method according to claim 45, wherein said renal disease is glomerulonephritis, vasculitis, nephritis or pyrlonephritis.

55. A method according to claim 54, wherein said inflammation is associated with joint pain, swelling, anemia, or septic shock.

